

WO 2004/029199

## SEQUENCE LISTING

&lt;110&gt; SmithKline Beecham Corporation

<120> A Set of Ubiquitous Cellular Proteins  
Involved in Viral Life Cycle

&lt;130&gt; P51375

&lt;140&gt; Unassigned

&lt;141&gt; Herewith

&lt;150&gt; 60/410,460

&lt;151&gt; 2002-09-13

&lt;160&gt; 8

&lt;170&gt; FastSEQ for Windows Version 4.0

&lt;210&gt; 1

&lt;211&gt; 1270

&lt;212&gt; PRT

&lt;213&gt; Homo sapien

&lt;400&gt; 1

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Lys Phe Met Cys Glu Val Gln Val Glu Tyr Asn Tyr Thr Gly Met
      35             40             45
Gly Asn Ser Thr Asn Lys Lys Asp Ala Gln Ser Asn Ala Ala Arg Asp
 50             55             60
Phe Val Asn Tyr Leu Val Arg Ile Asn Glu Ile Lys Ser Glu Glu Val
 65             70             75             80
Pro Ala Phe Gly Val Ala Ser Pro Pro Pro Leu Thr Asp Thr Pro Asp
      85             90             95
Thr Thr Ala Asn Ala Glu Gly Asp Leu Pro Thr Thr Met Gly Gly Pro
      100             105             110
Leu Pro Pro His Leu Ala Leu Lys Ala Glu Asn Asn Ser Glu Val Gly
      115             120             125

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Ala Ser Gly Tyr Gly Val Pro Gly Pro Thr Trp Asp Arg Gly Ala Asn  
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 Leu Lys Asp Tyr Tyr Ser Arg Lys Glu Glu Gln Glu Val Gln Ala Thr  
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 Leu Glu Ser Glu Glu Val Asp Leu Asn Ala Gly Leu His Gly Asn Trp  
 165 170 175  
 Thr Leu Glu Asn Ala Lys Ala Arg Leu Asn Gln Tyr Phe Gln Lys Glu  
 180 185 190  
 Lys Ile Gln Gly Glu Tyr Lys Tyr Thr Gln Val Gly Pro Asp His Asn  
 195 200 205  
 Arg Ser Phe Ile Ala Glu Met Thr Ile Tyr Ile Lys Gln Leu Gly Arg  
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 Arg Ile Phe Ala Arg Glu His Gly Ser Asn Lys Lys Leu Ala Ala Gln  
 225 230 235 240  
 Ser Cys Ala Leu Ser Leu Val Arg Gln Leu Tyr His Leu Gly Val Val  
 245 250 255  
 Glu Ala Tyr Ser Gly Leu Thr Lys Lys Lys Glu Gly Glu Thr Val Glu  
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 Pro Tyr Lys Val Asn Leu Ser Gln Asp Leu Glu His Gln Leu Gln Asn  
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 Ile Ile Gln Glu Leu Asn Leu Glu Ile Leu Pro Pro Pro Glu Asp Pro  
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 Ser Val Pro Val Ala Leu Asn Ile Gly Lys Leu Ala Gln Phe Glu Pro  
 305 310 315 320  
 Ser Gln Arg Gln Asn Gln Val Gly Val Val Pro Trp Ser Pro Pro Gln  
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 Ser Asn Trp Asn Pro Trp Thr Ser Ser Asn Ile Asp Glu Gly Pro Leu  
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 Ala Phe Ala Thr Pro Glu Gln Ile Ser Met Asp Leu Lys Asn Glu Leu  
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 Met Tyr Gln Leu Glu Gln Asp His Asp Leu Gln Ala Ile Leu Gln Glu  
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 Arg Glu Leu Leu Pro Val Lys Lys Phe Glu Ser Glu Ile Leu Glu Ala  
 385 390 395 400  
 Ile Ser Gln Asn Ser Val Val Ile Ile Arg Gly Ala Thr Gly Cys Gly  
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 Lys Thr Thr Gln Val Pro Gln Phe Ile Leu Asp Asp Phe Ile Gln Asn  
 420 425 430  
 Asp Arg Ala Ala Glu Cys Asn Ile Val Val Thr Gln Pro Arg Arg Ile  
 435 440 445  
 Ser Ala Val Ser Val Ala Glu Arg Val Ala Phe Glu Arg Gly Glu Glu  
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 Pro Gly Lys Ser Cys Gly Tyr Ser Val Arg Phe Glu Ser Ile Leu Pro

465		470		475		480									
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Lys	Leu	Glu	Ala	Gly	Ile	Arg	Gly	Ile	Ser	His	Val	Ile	Val	Asp	Glu
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Ile	His	Glu	Arg	Asp	Ile	Asn	Thr	Asp	Phe	Leu	Leu	Val	Val	Leu	Arg
			515				520					525			
Asp	Val	Val	Gln	Ala	Tyr	Pro	Glu	Val	Arg	Ile	Val	Leu	Met	Ser	Ala
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Thr	Ile	Asp	Thr	Ser	Met	Phe	Cys	Glu	Tyr	Phe	Phe	Asn	Cys	Pro	Ile
545					550					555				560	
Ile	Glu	Val	Tyr	Gly	Arg	Thr	Tyr	Pro	Val	Gln	Glu	Tyr	Phe	Leu	Glu
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Asp	Cys	Ile	Gln	Met	Thr	His	Phe	Val	Pro	Pro	Pro	Lys	Asp	Lys	Lys
			580					585					590		
Lys	Lys	Asp	Lys	Asp	Asp	Asp	Gly	Gly	Glu	Asp	Asp	Asp	Ala	Asn	Cys
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Asn	Leu	Ile	Cys	Gly	Asp	Glu	Tyr	Gly	Pro	Glu	Thr	Arg	Leu	Ser	Met
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Ser	Gln	Leu	Asn	Glu	Lys	Glu	Thr	Pro	Phe	Glu	Leu	Ile	Glu	Ala	Leu
625				630						635				640	
Leu	Lys	Tyr	Ile	Glu	Thr	Leu	Asn	Val	Pro	Gly	Ala	Val	Leu	Val	Phe
				645				650					655		
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Asn	Pro	His	Phe	Gly	Ser	His	Arg	Tyr	Gln	Ile	Leu	Pro	Leu	His	Ser
		675					680					685			
Gln	Ile	Pro	Arg	Glu	Glu	Gln	Arg	Lys	Val	Phe	Asp	Pro	Val	Pro	Val
	690					695				700					
Gly	Val	Thr	Lys	Val	Ile	Leu	Ser	Thr	Asn	Ile	Ala	Glu	Thr	Ser	Ile
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Thr	Ile	Asn	Asp	Val	Val	Tyr	Val	Ile	Asp	Ser	Cys	Lys	Gln	Lys	Val
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Lys	Leu	Phe	Thr	Ala	His	Asn	Asn	Met	Thr	Asn	Tyr	Ser	Thr	Val	Trp
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Ile	Ala	Leu	Ser	Ile	Lys	Leu	Leu	Arg	Leu	Gly	Gly	Ile	Gly	Gln	Phe
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 Glu His Thr Leu Arg Glu Leu Asp Ala Leu Asp Ala Asn Asp Glu Leu  
                   835                                  840                                  845  
 Thr Pro Leu Gly Arg Ile Leu Ala Lys Leu Pro Ile Glu Pro Arg Phe  
                   850                                  855                                  860  
 Gly Lys Met Met Ile Met Gly Cys Ile Phe Tyr Val Gly Asp Ala Ile  
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 Cys Thr Ile Ala Ala Ala Thr Cys Phe Pro Glu Pro Phe Ile Asn Glu  
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 Arg Met Gly Gly Glu Glu Ala Glu Ile Arg Phe Cys Glu His Lys Arg  
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 945                                  950                                  955                                  960  
 Lys Glu Ile Leu Ile Asn Ser Gly Phe Pro Glu Asp Cys Leu Leu Thr  
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 Gln Val Phe Thr Asn Thr Gly Pro Asp Asn Asn Leu Asp Val Val Ile  
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 Ser Leu Leu Ala Phe Gly Val Tyr Pro Asn Val Cys Tyr His Lys Glu  
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                   1060                                  1065                                  1070  
 Lys Lys Val Gln Ser Asp Gly Gln Ile Val Leu Val Asp Asp Trp Ile  
                   1075                                  1080                                  1085  
 Lys Leu Gln Ile Ser His Glu Ala Ala Ala Cys Ile Thr Gly Leu Arg  
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 Ala Ala Met Glu Ala Leu Val Val Glu Val Thr Lys Gln Pro Ala Ile  
 1105                                  1110                                  1115                                  1120  
 Ile Ser Gln Leu Asp Pro Val Asn Glu Arg Met Leu Asn Met Ile Arg  
                   1125                                  1130                                  1135  
 Gln Ile Ser Arg Pro Ser Ala Ala Gly Ile Asn Leu Met Ile Gly Ser  
                   1140                                  1145                                  1150  
 Thr Arg Tyr Gly Asp Gly Pro Arg Pro Pro Lys Met Ala Arg Tyr Asp

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Tyr Gly Gly Gly Tyr Ser Ser Gly Gly Tyr Gly Ser Gly Gly Tyr Gly		
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Gly Ser Ala Asn Ser Phe Arg Ala Gly Tyr Gly Ala Gly Val Gly Gly		1200
	1205	1210
Gly Tyr Arg Gly Val Ser Arg Gly Gly Phe Arg Gly Asn Ser Gly Gly		1215
	1220	1225
Asp Tyr Arg Gly Pro Ser Gly Gly Tyr Arg Gly Ser Gly Gly Phe Gln		1230
	1235	1240
Arg Gly Gly Gly Arg Gly Ala Tyr Gly Thr Gly Tyr Phe Gly Gln Gly		1245
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Arg Gly Gly Gly Gly Tyr		1260
1265	1270	

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 <212> DNA  
 <213> Homo sapien

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 gaagggtata attacactgg catgggaaat tccaccaata aaaaagatgc acaaagcaat 180  
 gctgccagag actttgttaa ctatttggtt cgaataaatg aaataaagag tgaagaagtt 240  
 ccagcttttg gggtagcatc tccgccccca cttactgata ctccatgacac tacagcaaat 300  
 gctgaaggag atttaccac aaccatggga ggacctctc ctccacatct ggctctcaa 360  
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 cagctgggca gaaggatttt tgcacgagaa catggatcaa ataagaaatt ggcagcacag 720  
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3810

&lt;210&gt; 3

&lt;211&gt; 894

&lt;212&gt; PRT

&lt;213&gt; Homo sapien

&lt;400&gt; 3

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Lys His Ser Ser Val Tyr Pro Thr Gln Glu Glu Leu Glu Ala Val Gln
      20           25           30
Asn Met Val Ser His Thr Glu Arg Ala Leu Lys Ala Val Ser Asp Trp
      35           40           45
Ile Asp Glu Gln Glu Lys Gly Ser Ser Glu Gln Ala Glu Ser Asp Asn
      50           55           60
Met Asp Val Pro Pro Glu Asp Asp Ser Lys Glu Gly Ala Gly Glu Gln
      65           70           75           80
Lys Thr Glu His Met Thr Arg Thr Leu Arg Gly Val Met Arg Val Gly
      85           90           95
Leu Val Ala Lys Cys Leu Leu Leu Lys Gly Asp Leu Asp Leu Glu Leu
      100          105          110
Val Leu Leu Cys Lys Glu Lys Pro Thr Thr Ala Leu Leu Asp Lys Val
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Ala Asp Asn Leu Ala Ile Gln Leu Ala Ala Val Thr Glu Asp Lys Tyr
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Glu Ile Leu Gln Ser Val Asp Asp Ala Ala Ile Val Ile Lys Asn Thr
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Lys Glu Pro Pro Leu Ser Leu Thr Ile His Leu Thr Ser Pro Val Val
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Arg Glu Glu Met Glu Lys Val Leu Ala Gly Glu Thr Leu Ser Val Asn
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Asp Pro Pro Asp Val Leu Asp Arg Gln Lys Cys Leu Ala Ala Leu Ala
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Ser Leu Arg His Ala Lys Trp Phe Gln Ala Arg Ala Asn Gly Leu Lys
      210          215          220
Ser Cys Val Ile Val Ile Arg Val Leu Arg Asp Leu Cys Thr Arg Val
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Pro Thr Trp Gly Pro Leu Arg Gly Trp Pro Leu Glu Leu Leu Cys Glu
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Arg Arg Val Leu Glu Cys Leu Ala Ser Gly Ile Val Met Pro Asp Gly

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Asp Pro Leu Pro Ser Lys Met Pro Lys Lys Pro Lys Asn Glu Asn Pro		
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Val Asp Tyr Thr Val Gln Ile Pro Pro Ser Thr Thr Tyr Ala Ile Thr		
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Pro Met Lys Arg Pro Met Glu Glu Asp Gly Glu Glu Lys Ser Pro Ser		
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Lys Lys Lys Lys Lys Ile Gln Lys Lys Glu Glu Lys Ala Glu Pro Pro		
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Gln Ala Met Asn Ala Leu Met Arg Leu Asn Gln Leu Lys Pro Gly Leu		
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Gln Tyr Lys Leu Val Ser Gln Thr Gly Pro Val His Ala Pro Ile Phe		
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Thr Met Ser Val Glu Val Asp Gly Asn Ser Phe Glu Ala Ser Gly Pro		
435	440	445
Ser Lys Lys Thr Ala Lys Leu His Val Ala Val Lys Val Leu Gln Asp		
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Met Gly Leu Pro Thr Gly Ala Glu Gly Arg Asp Ser Ser Lys Gly Glu		
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Asp Ser Ala Glu Glu Thr Glu Ala Lys Pro Ala Val Val Ala Pro Ala		
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Pro Val Val Glu Ala Val Ser Thr Pro Ser Ala Ala Phe Pro Ser Asp		
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Ala Thr Ala Glu Gln Gly Pro Ile Leu Thr Lys His Gly Lys Asn Pro		
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Lys Ala Tyr Ala Ala Leu Ala Ala Leu Glu Lys Leu Phe Pro Asp Thr		
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Pro Leu Ala Leu Asp Ala Asn Lys Lys Lys Arg Ala Pro Val Pro Val		
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Arg Gly Gly Pro Lys Phe Ala Ala Lys Pro His Asn Pro Gly Phe Gly		
610	615	620

Met Gly Gly Pro Met His Asn Glu Val Pro Pro Pro Pro Asn Leu Arg  
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 Phe Gly Gly Ala Asn His Gly Gly Tyr Met Asn Ala Gly Ala Gly Tyr  
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 690 695 700  
 Gly Gly Gly Gly Gly Ser Ser Gly Tyr Gly Ser Tyr Tyr Gln Gly Asp  
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 740 745 750  
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 Ser Tyr Ser Asn Ser Tyr Asn Ser Pro Gly Gly Gly Gly Gly Ser Asp  
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 His Gly Gly Tyr Gly Gly Gly Ser Gly Gly Gly Ser Ser Tyr Gln Gly  
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 Lys Gln Gly Gly Tyr Ser Gln Ser Asn Tyr Asn Ser Pro Gly Ser Gly  
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&lt;210&gt; 4

&lt;211&gt; 2685

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;400&gt; 4

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26

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 <212> PRT  
 <213> Homo sapien

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 Val Leu Leu Cys Lys Glu Lys Pro Thr Thr Ala Leu Leu Asp Lys Val  
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 Ser Cys Val Ile Val Ile Arg Val Leu Arg Asp Leu Cys Thr Arg Val  
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Gln Tyr Lys Leu Val Ser Gln Thr Gly Pro Val His Ala Pro Ile Phe		
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Met Gly Leu Pro Thr Gly Ala Glu Gly Arg Asp Ser Ser Lys Gly Glu		
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Asp Ser Ala Glu Glu Thr Glu Ala Lys Pro Ala Val Val Ala Pro Ala		
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Pro Val Val Glu Ala Val Ser Thr Pro Ser Ala Ala Phe Pro Ser Asp		
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Val Met Glu Leu Asn Glu Lys Arg Arg Gly Leu Lys Tyr Glu Leu Ile		
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Ser Glu Thr Gly Gly Ser His Asp Lys Arg Phe Val Met Glu Val Glu		
545	550	555
Val Asp Gly Gln Lys Phe Gln Gly Ala Gly Ser Asn Lys Lys Val Ala		
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Lys Ala Tyr Ala Ala Leu Ala Ala Leu Glu Lys Leu Phe Pro Asp Thr		
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Pro Leu Ala Leu Asp Ala Asn Lys Lys Lys Arg Ala Pro Val Pro Val		
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Arg Gly Gly Pro Lys Phe Ala Ala Lys Pro His Asn Pro Gly Phe Gly		
610	615	620

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<211> 2107

<212> DNA

<213> Homo sapien

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<211> 406

<212> PRT

<213> Homo sapien

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Pro Thr Arg Gln Pro Leu Ala Leu Asn Val Ala Tyr Arg Arg Cys Leu		
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Gln Ile Leu Ala Ala Gly Leu Phe Leu Pro Gly Ser Val Gly Ile Thr		
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Pro Ser Glu Lys Ala Tyr Glu Lys Pro Pro Glu Lys Lys Glu Gly Glu		
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Glu Glu Glu Glu Asn Thr Glu Arg Thr Thr Ser Arg Arg Gly Arg Arg		
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Lys His Gly Asn Ser Gly Val Thr Phe Pro Ser Leu Leu Phe Leu Pro		
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